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Remarks

Applicants are not aware of any errors in the description and drawings that require correction.

Applicants have amended claims 20 and 29 to address the objections raised in the Office Action. The changes do not affect patentability, as the meaning of the claim language prior to the changes was clear to those persons of ordinary skill in the art.

The Office Action rejected claims 4-6 under 35 U.S.C. §102(b), citing U.S. Patent No. 5,861,903 to Crawford et al.

Independent claim 4 defines an ink stick that is not taught by the Crawford et al. reference. The Office Action identifies the left perimeter side of the ink stick shown in the Crawford et al. reference as being substantially perpendicular to the feed direction. The Office Action also identifies that the right side of the ink stick forms a second nonlinear key element along a portion of the ink stick insertion perimeter that is substantially perpendicular to the feed direction. However, as seen in Figure 5 of the Crawford et al. reference, the left and right perimeter sides of the ink stick are substantially parallel to the orientation of the feed channel 25b. Therefore, Crawford et al. does not show the combination of elements specified in claim 4.

Claim 4 has nevertheless been amended to specify that the first nonlinear key element has a shape substantially identical to the shape of a portion of the insertion opening. This additional limitation further distinguishes the invention of claim 4 from the teachings of Crawford et al. The Crawford et al. reference shows receptacles or insertion openings 24A, 24B, 24C, 24D that are open ended into the elongate openings over the individual chutes 25A-D. This open endedness leaves the shape of the openings unrelated to the shape of the end of the ink stick that is perpendicular to the feed direction. Therefore,

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the invention as defined in claims 4-6 is patentably distinct over the Crawford et al. reference.

The Office Action rejected claims 1-3, 7-10, and 13-30 under 35 U.S.C. 103(a), citing U.S. Patent No. 5,861,903 to Crawford et al. in view of U.S. Patent No. 5,510,821 to Jones et al.

With respect to independent claim 1, the Office Action states that it will designate the left perimeter face of the Crawford et al. ink stick as a first perimeter segment, the right perimeter face as a second perimeter segment, and the bottom perimeter face as the third perimeter segment, and that the first and second perimeter segments intersect one another at a first corner. However, if the left perimeter face is designated as the first perimeter segment and the right perimeter face is the second perimeter segment, those two perimeter segments do not intersect. Later the Office Action states that Crawford et al. does not disclose the second perimeter segment including a second nonlinear key element, but that Jones et al. discloses a second perimeter segment including a second nonlinear key element. Applicants therefore conclude that the Office Action intended to designate that the bottom perimeter face would be treated as the *second* perimeter segment, and the right perimeter face would be treated as the *third* perimeter segment.

Nevertheless, the references do not teach anything that would lead a person of ordinary skill in the art to combine the references with one another to form the ink stick defined in claim 1. The Office Action points to the semi protruding nose portion 14 of the Jones et al. ink stick as the second nonlinear key element on the second perimeter segment. However, Jones et al. do not show or describe an insertion opening, and so do not teach any connection between the shape of that semi protruding nose portion and any portion of the insertion opening that provides access to the solid ink feed system. The openings shown by Crawford et al. include open ended sections of the

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receptacles or openings 24A-D. Thus, the references do not teach relationships among the shapes of the first, second, and third nonlinear key elements and the shapes of portions of the insertion opening that would lead a person to combine the references in the manner described in the Office Action to produce the combination of claim 1.

With respect to independent claim 7, the Office Action identifies various elements of the ink stick of Crawford et al., and then identifies the semi-protruding nose portion 14 of the ink stick of Jones et al. as a third of the nonlinear key elements on one of the end perimeter segments of the ink stick insertion perimeter. Jones et al. do not show an insertion opening of the ink feed system, and thus teach no relationship between the shape of the semi-protruding nose portion 14 and the shape of a portion of the insertion opening. The receptacles or insertion openings 24A-D of Crawford et al. include open end sections leading to the openings over the feed chutes 25A-D. Combining the teachings of the references would not lead the person of ordinary skill in the art to any correlation between the shape of the semi-protruding nose portion 14 and any insertion opening in the feed system. The semi-protruding nose portion 14 is shown only in connection with providing an abutment surface between adjacent ink sticks within the printing feed chute.

With respect to independent claim 15, the Office Action identifies at least three nonlinear key elements in the insertion perimeter of Crawford et al. if the two humps on the right side are identified as separate key elements. However, the Office Action does not describe how so specifying the two humps on the right side of the Crawford et al. ink stick as separate key elements needs the specific positioning limitations specified in claim 15. The Office Action proceeds to identify the semi-protruding nose portion 14 of the Jones et al. ink stick as a third of the nonlinear key elements on the end perimeter segment of the ink stick insertion perimeter. However, applicants note that Jones et al. do

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not show an insertion opening in the printer, and thus do not show a relationship between the shape of the semi-protruding nose portion 14 and an insertion opening in the ink feed system. Even if one were to combine the teachings of Jones et al. and Crawford et al., the feed system shown in Crawford et al. includes open ended segments of the openings 24A-D leading to the open slots above the feed chutes 25A-D. Thus, even if the references were combined, they do not suggest an ink stick having the particular nonlinear key elements specified in claim 15, including that the third nonlinear key element has a shape substantially identical to the shape of a portion of the insertion opening of the ink feed system.

With further reference particularly to dependent claim 21, the only insertion opening shown by Crawford et al. and Jones et al. is the insertion leading to the open slots over the feed chutes 25A-D. Thus, there is no end segments to the feed openings 24A-D, and thus at least substantial portions of the perimeter shape of any ink stick inserted through the insertion openings 24A-D will differ in significant manner from the perimeter of the insertion opening.

With respect to independent claim 22, the Office Action identifies various portions of the insertion opening 24A shown by Crawford et al., and notes that Crawford et al. lacks the insertion opening including a third nonlinear key element on the transverse perimeter segment of the ink stick insertion perimeter. The Office Action proceeds to state that the Jones et al. reference shows a third nonlinear key element on the transverse perimeter segment of the ink stick insertion perimeter.

The opening 24A in Crawford et al. leads directly into the wide opening over the feed chute 25A, leaving little to no structure to an opening perimeter segment that is transverse to the feed direction. Jones et al. do not add to this teaching, as Jones et al. do not show an insertion opening, with or

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without any nonlinear key element in a transverse perimeter segment that is not present in the Crawford device. The Office Action points to the semi-protruding nose portion 14 of the Jones et al. ink stick. However, the reference includes no indication of a relationship between the shape of that portion of the ink stick and any insertion opening in the feed system. Therefore, the person of ordinary skill in the art would not be led to combine the references in the manner suggested in the Office Action.

With respect to independent claim 29, the Office Action identifies various elements of the Crawford et al. teaching, including aligning the ink stick insertion perimeter with the insertion opening comprising aligning at least three nonlinear key element shapes, if the humps on the right perimeter side of the ink stick are seen as separate key elements. However, if the humps on the right perimeter side of the Crawford et al. ink stick are seen as separate key elements, none of the key elements of the Crawford et al. ink stick are oriented at least partially transverse to the feed direction of the feed chute 25A-D. The Office Action proceeds to identify the semi-protruding nose portion 14 of the Jones et al. ink stick as at least one of the nonlinear key elements that is oriented at least partially transverse to the feed direction. However, Jones et al. do not teach a relationship between the shape of the semi-protruding nose portion 14 and any insertion opening of the key plate. The teaching of Crawford et al. is that the insertion openings 24A-D open to relatively wide openings over the feed chute, opening a wide opening that is almost as wide as the insertion opening 24A-D. Thus, the person of ordinary skill in the art would not read a combination of Crawford et al. and Jones et al. as suggesting a method in which the ink stick insertion perimeter is aligned with at least three nonlinear key element shapes of the insertion opening of the key plate, and in which at least one of the nonlinear key element shapes is oriented at least partially transverse to the feed direction.

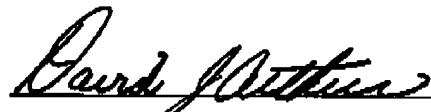
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Applicants therefore respectfully submit that the present invention is patentably distinct from the references cited. Applicants respectfully request allowance of claims 1, 2, and 4-30.

No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney (or agent) hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

If the Examiner considers personal contact helpful to dispose of this case, call David J. Arthur, at Telephone Number (585) 423-9215, Rochester, New York.

Respectfully submitted,



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